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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/660,757

09/12/2003

Randolph Twogood

T3635-908693

5976

181

7590

09/14/2006

MILES & STOCKBRIDGE PC  
1751 PINNACLE DRIVE  
SUITE 500  
MCLEAN, VA 22102-3833

EXAMINER

OLSON, JASON C

ART UNIT

PAPER NUMBER

2627

DATE MAILED: 09/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/660,757	Applicant(s) TWOGOOD ET AL.	
	Examiner Jason C. Olson	Art Unit 2627	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 July 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,7-9,11 and 15-22 is/are rejected.
- 7) ☒ Claim(s) 2,5,6,10 and 12-14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election without traverse of claims 1-22 in the reply filed on 7/26/2006 is acknowledged.

### ***Drawings***

New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the drawings furnished, specifically the photographs are not clear.

"Photographs, including photocopies of photographs, are not ordinarily permitted in utility and design patent applications. The Office will accept photographs in utility and design patent applications, however, if photographs are the only practicable medium for illustrating the claimed invention. The photographs must be of sufficient quality so that all details in the photographs are reproducible in the printed patent." (See MPEP Patent Rules § 1.84) Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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Claims 1, 3, 4, 7-9, 11, and 15-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Rent (U.S. 6,430,000).

Regarding claim 1, Rent teaches at least one electromechanical disk drive (see col. 4, ln. 58-63 and figure 1, items 10); a volume of air captured at room temperature and pressure; a sealed enclosure encapsulating the electromechanical disk drive and the volume of air at room temperature and pressure, the sealed enclosure consisting essentially of material flowed and hardened in one piece surrounding the electromechanical disk drive (see col. 5, ln. 33-43; the hard drives are encapsulated in a volume of air at room temperature and pressure; the enclosure is sealed by welding, or material flowed and hardened, to form one piece surrounding the disk drives); means for communicating data between the electromechanical disk drive and a controller located outside of the sealed enclosure (see col. 5, ln. 63-col. 6, ln. 10).

Regarding claims 3 and 4, Rent teaches the apparatus is portable and disposable (see figure 4, the hermetically sealed drives are portable in the sense that the apparatus can be moved and disposable in the sense that the encapsulated stack of drives can be disposed of) and electromechanical disk drive is non-accessible and non-repairable (see figure 4, the encapsulated drives cannot be accessed once they are hermetically sealed).

Regarding claim 7, Rent teaches the apparatus is operable while submerged in salt water (see col. 5, ln. 34-36, the hermetically sealed capsule is air tight and therefore able to operate while submerged in salt water.)

Regarding claim 8, Rent teaches the apparatus is operable at altitudes above about 70,000 feet above sea level (see col. 3, ln. 8-10; 70,000 feet above sea level is a low air pressure environment).

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Regarding claims 9 and 11, Rent teaches the sealed enclosure is free of mechanical closure devices and the sealed enclosure forms a continuous three-dimensional shell (see col. 5, ln. 40-43 and figure 4; the enclosure is welded together causing a continuous three-dimensional shell and free of mechanical closure devices).

Regarding claim 15, Rent teaches the material comprises epoxy resin (see col. 5, ln. 36-37; plastic or any other material includes epoxy resin).

Regarding claim 16, Rent teaches the electromechanical disk drive is a commercial off-the-shelf disk drive normally unreliable in harsh environments (see col. 5, ln. 7-11).

Regarding claim 17, Rent teaches at least a second electromechanical disk drive inside of the sealed enclosure (see col. 4, ln. 58-63).

Regarding claims 18-22: method claims 18-22 are drawn to the method of using the corresponding apparatus claimed in claims 1, 3, 4, 7-9, 11, and 15-17. Therefore method claims 18-22 correspond to apparatus claims 1, 3, 4, 7-9, 11, and 15-17 and are rejected for the same reasons of anticipation as used above.

#### ***Allowable Subject Matter***

Claims 2, 5, 6, 10, and 12-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art of record fails to teach alone or in combination the material is electrically non-conductive; is thermally insulating due to a low rate of thermal absorption; has low hygroscopic characteristics, including a very low rate of absorption and very low susceptibility to high moisture and corrosive environments; exhibits a

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tensile strength of at least about 10,000 psi; exhibits a flexural strength of at least about 14,000 psi; and provides high frequency damping.

***Conclusion***

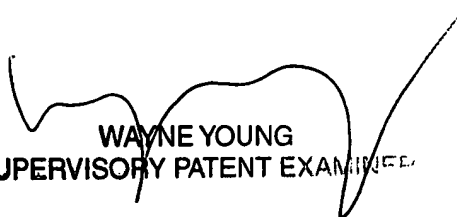
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason C. Olson whose telephone number is (571)272-7560. The examiner can normally be reached on Monday thru Thursday 7:30-5:30; alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on (571)272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



JCO  
September 11, 2006



WAYNE YOUNG  
SUPERVISORY PATENT EXAMINER